Claim Listing

1. (Original) A method of administering live cells to a patient in need thereof comprising injecting into a treatment site of the patient an effective amount of a composition comprising biocompatible, biodegradable polymer microparticles and live cells, wherein said cells provide a therapeutic effect in the patient.

2. (Original) The method of Claim 1 wherein the therapeutic effect comprises the generation of new tissue at the treatment site.

3. (Original) The method of Claim 2 wherein the live cells are selected from cartilage producing cells, organ cells, fibroblasts, osteoblasts, nerve cells, smooth muscle cells, skeletal muscle cells, and Schwann cells.

4. (Original) The method of Claim 2 wherein the cells are chondrocytes.

5. (Original) The method of Claim 4 wherein the new tissue is cartilage tissue.

6. (Original) The method of Claim 5 wherein the treatment site is into the articular space of a joint of the patient.

7. (Original) The method of Claim 1 wherein the therapeutic effect is the secretion of a biologically active secretory molecule.

8. (Original) The method of Claim 7 wherein the biologically active secretory molecule is selected from hormones, cytokines, growth factors, trophic factors, angiogenesis factors, antibodies, blood coagulation factors, lymphokines, enzymes and agonists, precursors, active analogs or active fragments thereof.

9. (Original) The method of Claim 8 wherein the biologically active secretory molecule is the hormone insulin.

10. (Original) The method of Claim 9 wherein the live cells are pancreatic islet cells.

11. (Original) The method of Claim 8 wherein the biologically active secretory molecule is dopamine.

12. (Original) The method of Claim 11 wherein the live cells are selected from PC-12 cells, adrenal chromaffin cells and fetal nigral primordia cells.

13. (Original) The method of Claim 1 wherein the the biocompatible, biodegradable polymer of the microparticle is selected from poly(lactides), poly(glycolides), poly(lactide-co-glycolides), poly(lactic acid)s, poly(glycolic acid)s, polycarbonates, polyesteramides, polyanydrides, poly(amino acids), polyorthoesters, poly(dioxanone)s, poly(alkylene alkylate)s, copolymers of polyethylene glycol and polyorthoester, polyurethanes, blends thereof, and copolymers thereof.

14. (Original) The method of Claim 13 wherein the biocompatible, biodegradable polymer is a poly(lactide-co-glycolide).

15. (Original) The method of Claim 1 wherein the composition further comprises a pharmaceutically acceptable carrier.

16. (Original) The method of Claim 1 wherein the composition further comprises a biologically active agent.

17. (Original) The method of Claim 16 wherein the biologically active agent has tissue regeneration inductive properties.

18. (Original) The method of Claim 17 wherein the biologically active agent is a growth factor or differentiating factor.

19. (Original) The method of Claim 18 wherein the growth factor is selected from basic fibroblast growth factor (bFGF), platelet-derived growth factors (PDGF), transforming growth factors (TGF-α, TGF-β), cementum growth factors, epidermal growth factor (EGF), hepatocyte growth factor, heparin binding factor, insulin-like growth factors I or II (IGF-I, IGF-II), erythropoietin, and nerve growth factor (NGF).

20. (Original) The method of Claim 18 wherein the differentiating factor is a morphogenic protein.

21. (Original) The method of Claim 20 wherein the morphogenic protein is selected from OP-1, OP-2, OP-3, BMP2, BMP3, BMP4, BMP5, BMP6 and active fragments and derivatives thereof.

22. (Original) The method of Claim 1 wherein the concentration of cells in the composition is from about 0.5×10^6 cells/mL to about 50×10^6 cells/mL.

(Canceled) Claims 23-60